



# Alternative and Renewable Fuel and Vehicle Technology Program

## Advisory Committee Meeting

February 28, 2013

California Energy Commission  
Hearing Room A



## Meeting Agenda

- 10:30 Introductions and Opening Remarks
- 10:45 Program Status Update
- 11:05 2013-2014 Investment Plan Update
- 11:30 ARB Presentation
- 11:45 Guest Comment
- 11:55 Lunch
- 1:00 Advisory Committee and Public Discussion
- 3:00 Public Comment



# Program Status Update

**Jim McKinney**  
**Program Manager**



## Program Status Update

- Now in 5<sup>th</sup> year of 7.5-year duration
- Current emphases:
  - Managing existing agreements
  - Developing agreements based on previous solicitations
  - Evaluating proposals from recent solicitations
  - Developing new solicitations
  - Preparing benefits report
  - Supporting reauthorization efforts
  - Conducting 3103 rulemaking



## Funding Summary: 2009-2012

2009 – 2012 Alternative Vehicle, Fuel & Infrastructure Investments			
Investment Areas	Funding Amount (\$ millions)	Percent of Total (%)	Number of Awards
Biofuels	124.98	35	45
Electric Drive	123.93	34	82
Natural Gas	41.64	12	48
Hydrogen*	22.72	6	5
Workforce Development	24.03	7	30
Market and Program Development	21.73	6	15
<b>Total</b>	<b>359.03</b>	<b>100</b>	<b>225</b>

\*Does not include current \$29 million hydrogen solicitation

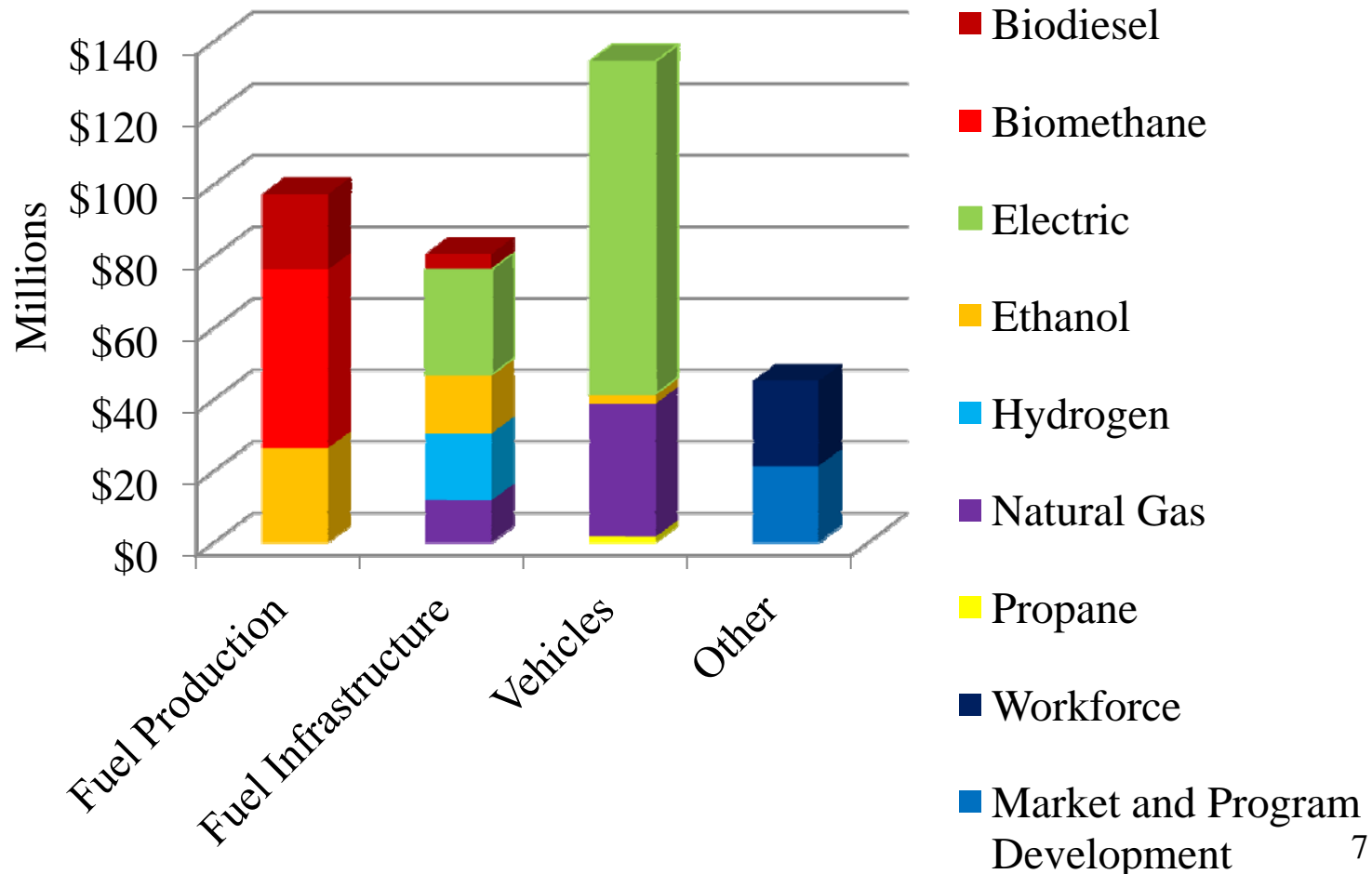


## Existing Agreements

- Summary
  - Roughly 225 agreements existing or under development
  - Does not include:
    - Vehicle buydown incentives
    - Agreements resulting from current or future solicitations
  - Nearly \$360 million encumbered or awarded



## Existing Agreements





## Recent Awards

- Recent Awards from Infrastructure Solicitation
  - Charging infrastructure (\$2.9 million)
    - 286 level 2 chargers
    - 51 fast chargers
  - Natural Gas (\$1.8 million)
    - 4 CNG stations
    - 1 LNG station
  - E85 (\$1.3 million)
    - 19 fueling sites





## Recent Awards, cont.

- Recent Awards from Fuel Production Solicitation
  - Biomethane production (\$3.8 million)
    - Blue Line Transfer – Anaerobic digestion of food and green waste into biomethane
    - Environ Strategy Consultants – Anaerobic digestion of solid food waste into biomethane
  - Biodiesel production (\$6 million)
    - Eslinger Biodiesel – Commercial biodiesel production from waste fats and oils
  - Ethanol production (\$5 million)
    - Mendota Bioenergy – Ethanol from energy beets via enzyme and microbial conversion



## Recent Awards, cont.

- Other Items
  - Supplement CVRP funding of light-duty plug-in electric vehicles (\$4.5 million)
  - Fully fund additional medium- and heavy-duty truck demonstration projects with CALSTART (\$3.5 million)
  - Supplement previous funding for technical support from the UC Irvine STREET model (\$765,000)



## Current Solicitations

- One solicitation currently open
  - Buydown Incentives (PON-11-603)
    - Propane: incentives still available
    - Natural gas: all incentives reserved
- Two solicitations recently closed
  - Natural Gas Fueling Infrastructure (PON-12-605)
    - \$2.59 million available
  - Hydrogen Fuel Infrastructure (PON-12-606)
    - \$29.7 million available
  - Proposals currently being reviewed and scored



## Current Solicitations, cont.

- Related PIER Solicitations
  - Renewable natural gas transportation fuel production systems with value added co-products/benefits
    - Up to \$2.45M available
  - Advanced natural gas engine research and development for Class 3 through Class 7 applications
    - Up to \$3M available
  - High purchase costs and disposal impacts of PEV battery packs
    - NOPA totaling \$1.75M for 3 projects was released on February 25



## Future Funding Opportunities

Description	\$ Available	Expected Release
Commercial Scale Biofuels Production	\$9.3 Million	March
Charging Infrastructure	\$6.6 Million	April
Electric Truck Retrofit Demonstration	~\$2.4 Million	April
Natural Gas and Propane Vehicle Deployment	\$12.6 Million	Ongoing/Spring
Regional Planning	\$2.7 Million	Spring
Centers for Alternative Fuels	\$2.7 Million	Spring



## 2013 Benefits Report

- AB 109 directs Energy Commission to report on ARFVTP activities each 2 years as part of IEPR
  - Descriptive summary of program awards
  - Expected benefits from investments
  - Contributions of projects to portfolio of clean fuels and vehicles
  - Obstacles and recommendations
  - Staff added job creation benefits



## 2013 Benefits Report: Approach

- Substantially similar to 2011 approach
  - NREL, UCD and ARB will assist on key assumptions, methods and data
    - Benefits not realized until fuel produced or vehicles on road
    - Direct survey of grantees for data
- Potential Changes
  - US EPA recommends adding public health benefits from NO<sub>x</sub> and PM reductions
  - Secondary job and economic benefits
  - Sustainability
  - More “user friendly” narrative and graphics



## Metrics Discussion

- Some stakeholders asking about “metrics-based allocation” in Investment Plan
  - Concerned biodiesel underfunded
  - Believes biodiesel offers most cost-effective near-term GHG reduction benefits
- Staff View
  - Biodiesel could be used more broadly now.
    - NOx emissions issue in non-attainment air basins
  - Renewable Diesel offers strong potential in truck sector
  - Metrics will be fully reviewed in Benefits Report
  - Near term metrics will overvalue currently mature technologies and undervalue long term investments in ZEV technologies





## Other Items

- Statewide PEV Infrastructure Plan
  - Workshop held on January 30
  - Participants included EVSE providers, local agencies, non-profit organizations, and other groups
- Section 3103 Rulemaking - LCFS Credit Discounting
- Reauthorization Legislation
  - Continuing to develop and distribute program information in anticipation of stakeholders' and policymakers' requests



# Questions on Program Status?



# 2013-14 Investment Plan Update

**Charles Smith**  
**Project Manager**



## Schedule Recap

- First Advisory Committee Meeting
  - September 19, 2012
  - Presentations from industry stakeholders
- *2013-2014 Investment Plan Update – Staff Draft*
  - Released November 20, 2012
- Second Advisory Committee Meeting
  - December 4, 2012
  - Discussion of Staff Draft
- *2013-2014 Investment Plan Update – Revised Staff Draft*
  - Released January 10, 2013
  - Concurrent with Governor's proposed budget



## Remaining Schedule

- Third Advisory Committee Meeting
  - February 28, 2013
  - Written comments requested by March 14
- *2013-2014 Investment Plan Update – Lead Commissioner Report*
  - Based on *Revised Staff Draft*, plus more recent public and Advisory Committee input
  - Anticipated release in mid-April
- Business Meeting Approval
  - First week of May
  - Prior to Governor's Revised Budget



## Revised Staff Draft

- Incorporates Minor Questions and Suggestions
  - 30+ comments submitted to docket since *Staff Draft*
  - Other questions and suggestions may still be considered in developing *Lead Commissioner Report*
- Updates ARFVT Program Information
- Responds to Legislative Mandate
  - Legislature has not requested follow-up information to date



## Summary of Updates

- Updates Throughout
  - Updates on recent solicitations, awards and activities
  - Additional discussion of relevant policies and supporting work
- Biofuel Production and Supply
  - Clarified eligibility of landfill gas, with preference for biomethane from pre-landfill feedstocks
- Hydrogen Fueling Infrastructure
  - Prominence in long-term scenarios
  - Importance in accelerating station development to meet target of 68 stations
  - Description of carbon intensities for various pathways
  - More information on cost per station



## Summary of Updates, cont.

- Workforce Training
  - Proposition 39 displaced some need and opportunities for ARFVT Program funding
  - Minor reduction in funding (\$0.5 million)
- Regional Readiness and Planning
  - Ongoing discussions with previous recipients and related stakeholders on how expedite alternative fuel vehicle deployment
  - Minor increase in funding (\$0.5 million)
  - May be combined with previous year's \$2.7 million





## Future Steps

- Development of *Lead Commissioner Report*
  - Seeking final input from all stakeholders
    - Comments requested by March 14
  - Continued analysis of existing ARFVT Program investments, as well as related programs and policies
  - Anticipated release in mid-April
- Future solicitations
  - Plans underway for future solicitations
  - Whether and how to incorporate FY 2013-2014 funding?



# CALIFORNIA ENERGY COMMISSION

	Project/Activity	Allocation for FY 2013-2014
<b>Alternative Fuel Production</b>	Biofuel Production and Supply	\$23 Million
<b>Alternative Fuel Infrastructure</b>	Electric Charging Infrastructure	\$7 Million
	Hydrogen Fueling Infrastructure	\$20 Million
	Natural Gas Fueling Infrastructure	\$1.5 Million
<b>Alternative Fuel and Advanced Technology Vehicles</b>	Natural Gas Vehicle Incentives	\$12 Million
	Light-Duty Plug-in Electric Vehicles	\$5 Million
	Medium- and Heavy-Duty Advanced Vehicle Technology Demonstration	\$15 Million
<b>Emerging Opportunities</b>	Emerging Opportunities (Federal Cost Sharing)	\$3 Million
<b>Manufacturing</b>	Manufacturing Facilities, Equipment and Working Capital	\$10 Million
<b>Workforce Training and Development</b>	Workforce Training and Development	\$2 Million
<b>Market and Program Development</b>	Regional Alternative Fuel Readiness and Planning	\$1.5 Million
	<b>Total Available</b>	<b>\$100 Million</b>